

a first interferometer system optically connected to said movable body,
which has a measurement axis passing through a substantial center of an irradiation region of
said exposure beam and which measures positional information of said movable body relating
to a direction intersecting with said predetermined direction.--

--43. (New) An apparatus according to claim 42, further comprising:

a second interferometer system, optically connected to said movable body,
which measures positional information of said movable body relating to said predetermined
direction.--

--44. (New) An apparatus according to claim 43, wherein said second
interferometer system has a plurality of measurement axes and measures rotational
information of said movable body also.--

--45. (New) An apparatus according to claim 42, wherein said movable body is
rotatable about a predetermined axis passing through the irradiation region of said exposure
beam, while exposing said second object.--

--46. (New) A scanning type exposure apparatus in which in synchronism with
moving a first object in a predetermined direction relative to an exposure beam, a second
object is moved, thereby exposing sequentially each of a plurality of defined regions on said
second object, comprising:

a projection system which is disposed in an optical path of the exposure
beam, said first object being provided on an object side of the projection system;

a movable body which holds said first object, at least a part of the movable
body being disposed on the object side of the projection system;

a first interferometer system, optically connected to said movable body,
which has a plurality of measurement axes for detecting positional information of said
movable body relating to said predetermined direction; and

a plurality of reflection surfaces disposed separately on said movable body in correspondence with said plurality of the measurement axes.--

--47. (New) An apparatus according to claim 46, further comprising:

a second interferometer system, optically connected to said movable body, which has a measurement axis and measures positional information of said movable body with respect to a direction intersecting with said predetermined direction; and

a reflection surface disposed on said movable body for said second interferometer system and extended substantially in parallel with said predetermined direction.--

--48. (New) An apparatus according to claim 47, wherein the measurement axis of said second interferometer system passes through a substantial center of the irradiation region of said exposure beam.--

--49. (New) An apparatus according to claim 47, wherein said movable body is rotatable about a predetermined axis passing through the irradiation region of said exposure beam.--

--50. (New) A scanning type exposure apparatus in which in synchronism with moving a first object in a first direction, a second object is moved in a second direction, thereby exposing sequentially each of a plurality of defined regions on said second object, comprising:

a projection optical system which is disposed in an optical path of an exposure beam, said first object being provided on one side of the projection optical system, said second object being provided on the other side of the projection optical system, and an image of a pattern formed on said first object being projected onto said second object by the projection optical system;

a first movable stage which holds said first object, at least a part of the first movable stage being disposed on the one side of the projection optical system;

a second movable stage which holds said second object, at least a part of the second movable stage being disposed on the other side of the projection optical system;

a first interferometer system which outputs positional information of said first movable stage, the first interferometer system being optically connected to said first movable stage;

a second interferometer system which outputs positional information of said second movable stage, the second interferometer system being optically connected to said second movable stage;

a first drive mechanism, functionally connected to the first movable stage, which moves said first movable stage in said first direction;

a second drive mechanism, functionally connected to the second stage, which moves said second movable stage in said second direction; and

a controller functionally connected to said first interferometer system, said second interferometer system, said first drive mechanism and said second drive mechanism, which converts positional information in said second direction of said second movable stage outputted from said second interferometer system to first speed information and speed controls said second drive mechanism so that said first speed information may correspond to a constant speed V , and which converts positional information in said first direction of said first movable stage outputted from said first interferometer system to second speed information and speed controls said first drive mechanism so that said second speed information may correspond to a constant speed V/β , where β is a projection magnification of the image of the pattern on said first object projected by said projection optical system.--